

UTILITY PATENT APPLICATION TRANSMITTAL

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Toshinao KOMURO

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APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

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1. ☒ Fee Transmittal Form
2. ☒ Specification, Claims & Abstract [Total Pages: 25]
3. ☒ Drawing(s) (35 USC 113) [Total Sheets: 20]
4. ☒ Oath or Declaration [Total Pages: 1]
 - a. ☒ Newly executed (original or copy)
 - b. ☐ Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 17 completed)
 - i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation by Reference (usable if Box 4b is checked)
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. ☐ Microfiche Computer Program (Appendix)
7. ☐ Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. ☐ Computer Readable Copy
 - b. ☐ Paper Copy (identical to computer copy)
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ACCOMPANYING APPLICATION PARTS

8. ☒ Assignment Papers (cover sheet & document(s))
9. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
10. ☐ English Translation Document (if applicable)
11. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
14. ☐ Small Entity Statement(s) ☐ Statement filed in prior application, status still proper and desired.
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☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: /
18. CORRESPONDENCE ADDRESS
 STAAS & HALSEY
 Attn: Todd E. Marlette
 700 Eleventh Street, N.W., Suite 500
 Washington, DC 20001

 Telephone: (202) 434-1500
 Facsimile: (202) 434-1501

TITLE OF THE INVENTION

Viewer System and Method Allocating a Degree of Importance to a Network
Address Based Upon Frequency of Display

CROSS-REFERENCE TO RELATED APPLICATIONS

5 This application is based upon and claims priority of Japanese Patent Application
No. 10-269277 filed September 24, 1998, the contents being incorporated herein by
reference.

BACKGROUND OF THE INVENTION

10 The present invention relates to the art of counting a number of times that images
accessed by unique identifying information is displayed during a display of images. More
particularly, the present invention relates to the art of executing particular displays and
processes during a display of images when the unique identifying information is displayed
greater than a threshold value.

15 FIG. 14 (PRIOR ART) is an example of a conventional WWW browser for a
terminal-server system according to the related art. As illustrated, a Web page is generated
from WWW data 23 in a WWW server 10 and is down-loaded to a terminal 12 via network
11. The down-loaded Web page is then displayed by a WWW browser functioning unit 13.

20 A filter registering unit 21 and a filter functioning unit 22 are included in the
WWW server 10 and strictly select an amount of information from the WWW data 23 by
registering necessary information for each user.

The conventional WWW browser functioning unit 13 has only a function to realize a visual display which includes changing a color of a URL for a certain constant period when a displayed URL of the Web page is used, without reference to a number of times of display. In this regard, a user may only designate a Web page having a higher frequency of use by registering a URL to a bookmark 19. The URL registered to the bookmark 19 can then be displayed through selection from bookmark 19 without designating the actual address.

In the method according to the related art, the Web pages having a higher usability are accessed through registration with the bookmark 19. However, the number of times of display for each of the registered Web pages cannot be detected from the URLs which are accumulated in the bookmark 19. Moreover, since each URL displayed by an original Web page is registered as one Web page in the bookmark, an amount of information in the bookmark substantially increases.

Furthermore, when a URL of a Web page is used without relation to the number of times of display, the color of URL may change for a certain constant period but the information which is used for a certain user cannot be managed on the Web page. Thus, individual management is required for a user resulting in troublesome procedures.

BRIEF SUMMARY OF THE INVENTION

It is therefore an object of the present invention to solve the above-mentioned problem by setting a degree of importance for a display depending on a number of times of display in a WWW browser.

It is a further object of the present invention to display a mark indicating a degree of importance of a URL in a Web page itself.

Moreover, it is an even further object of the present invention to provide a URL having a predetermined degree of importance which is automatically sorted and registered to a bookmark.

It is still a further object of the present invention to realize management of information by a user easily and conveniently by automatically generating a Web page from information in a bookmark.

It is still a further object of the present invention to provide a browser which displays a URL on the Internet in order to register a number of times of display, a threshold value, and an importance degree process for each URL. Thereby, an importance degree process is executed by inspecting an adequacy of the degree of importance process registered for each display of a URL, such that a selected URL is registered to the bookmark upon exceeding the threshold value. The URL is then subsequently registered to a designated group at the time of registration to the bookmark, and the sequence in the bookmark is changed depending on the number of times of display of each registered URL.

By way of the present invention, a degree of importance can be set for a URL and displayed depending on a number of times of display for each of a plurality of users even in the same home page. Moreover, the page having a larger number of times of display can be registered automatically to the bookmark of the WWW browser and the Web page may be automatically generated with the registered bookmark information. Therefore, a user can easily realize information management and operation of the Web pages.

Objects of the present invention are achieved by a viewer to display images which are accessible by an associated identifying information, the viewer including a definition management note to store a number of times of display of any image which has been accessed by an associated unique identifying information; and an importance degree control unit to count a number of times of display of any image accessed by the unique identifying information, wherein the importance degree control unit outputs the number for storage by the definition management note.

Further objects of the present invention are achieved by a viewing method using a browser to display Web pages having associated URLs, including the steps of counting a number of times of display of a Web page accessed by an associated URL; and executing a particular process when the counted number of times exceeds a threshold value.

Even further objects of the present invention are achieved by a display method of an image which is accessible by an associated identifying information, the display method including the steps of storing a number of times of display of any image which has been accessed by an associated unique identifying information; and counting a number of times of display of any image accessed by the unique identifying information.

Moreover, objects of the present invention are achieved by a browser to display a Web page accessed via the Internet by an associated URL, the browser including a definition management note to store a number of times of display of any Web page which has been accessed by an associated URL; and an importance degree control unit to count a number of times of display of any Web page accessed by the URL, wherein the importance degree control unit outputs the number for storage by the definition management note.

BRIEF DESCRIPTION OF THE DRAWINGS

These and other objects and advantages of the present invention will become apparent and more readily appreciated from the following description of the preferred embodiments, taken in conjunction with the accompanying drawings of which:

5 FIG. 1 is a block diagram illustrating a WWW browser which can set a degree of importance in a display according to a preferred embodiment of the present invention.

FIG. 2 is a block diagram showing a format of a management note according to a preferred embodiment of the present invention.

10 FIG. 3 is a block diagram showing an image format of a WWW browser according to a preferred embodiment of the present invention.

FIG. 4 is a block diagram of a degree of importance of a registering image.

FIG. 5 is a block diagram of an example of an image to be deleted in a definition management note.

15 FIG. 6 is a block diagram of an image to be changed in a definition management note.

FIG. 7 is a block diagram of a Web page accessed by a WWW browser according to a preferred embodiment of the present invention.

FIG. 8 is a block diagram of a Web page accessed according to a degree of importance.

20 FIG. 9 is a block diagram of a Web page that was automatically generated from a bookmark.

FIGS. 10A-10D are flowcharts of a display process according to a preferred embodiment of the present invention.

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T.K. 11A-11B are flowcharts
FIG. ~~11 is a flowchart~~ of a registering process according to a preferred

embodiment of the present invention.

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T.K. 12A-12B are flowcharts
FIG. ~~12 is a flowchart~~ of a deleting process according to a preferred embodiment

of the present invention.

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T.K. 13A-13D are flowcharts
FIG. ~~13 is a flowchart~~ of a changing process according to a preferred embodiment

of the present invention.

FIG. 14 (PRIOR ART) is a block diagram of a conventional WWW browser according to the related art.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Reference will now be made in detail to the preferred embodiments of the present invention, examples of which are illustrated in the accompanying drawings, wherein like reference numerals refer to like elements throughout.

FIG. 1 is a block diagram illustrating a WWW browser which can set a degree of importance in a display according to a preferred embodiment of the present invention. As illustrated, WWW server 10 includes WWW data 23, filter registering unit 21 and filter functioning unit 22. Terminal 12 includes a WWW browser functioning unit 13, display control unit 14, an importance degree control unit 15, a definition control unit 16, an automatic registration control unit 17, a definition management note 18, a bookmark 19 and an automatic page generating unit 24. The WWW server 10 and the terminal 12 are

connected through a network 11 such as the Internet, etc. According to the structure explained above, the Web page generated from the WWW data 23 in the WWW server 10 is down-loaded by the WWW browser functioning unit 13 of terminal 12 via network 11. The down-loaded Web page is transferred to the importance degree control unit 15 to check whether the URL in the Web page is registered or not in the definition management note 18.

When a URL is not yet registered in the definition management note 18 or the number of times of display has not reached the degree of importance, the WWW browser functioning unit 13 displays the down-loaded web page "as is." If the number of times of display reaches a degree of importance, such Web page is updated to be a Web page in which a degree of importance mark is given to the associated URL. In this case, registration of the URL to the bookmark is defined, such that the importance degree control unit 15 calls the automatic registration control unit 17 to automatically register the relevant URL to bookmark 19. Moreover, the automatic registration control unit 17 may call the automatic page generating unit 24 to automatically generate the Web page from the URL information in bookmark 19. The WWW browser functioning unit 13 displays each page depending on the updated definition management note 18.

Moreover, registration/deletion control unit 16, hereinafter "definition control unit 16", is called by selecting an icon with the WWW browser functioning unit 13, and the image to be registered or deleted is displayed by the WWW browser via the display control unit 14. Criteria for registration of an image to the definition management note 18 can be made by inputting a predetermined number of times of display, an importance degree, an importance degree mark, or a bookmark registration instruction. Meanwhile, when an image

is to be deleted from definition management note 18, the definition information and the number of times of display registered to the definition management note can also be deleted.

Numeral 20 designates a medium for storing a program in relation to the present invention. This medium stores information which may be read from a computer, such as a CD-ROM, and may store a program to be operated in the terminal 12. The program of the terminal 12 of this invention is read to the terminal from the CD-ROM for execution.

FIG. 2 is a block diagram showing a structure of a definition management note according to a preferred embodiment of the present invention. The definition management note 18 is structured to include a URL name, an importance degree, a threshold value, an importance degree mark, a number of times of use (display), and automatic registration information. The URL of a registered Web page is managed by the URL name. For one URL name, a plurality of importance degree levels can be set. The number of times of use is set as a corresponding importance degree when the number of times of display has reached the threshold value. The importance degree mark corresponds to the degree of importance and is formed of a format and a mark.

As a format of a mark, examples may include characters, images, voices or colors to be set. The mark is used to display the degree of importance which corresponds to the set format. However, since image and voice require a large amount of data, file names of images and voices are preferably pre-set. The number of times of use is a column used to set a number of times for display of a relevant URL and this number of times is counted up when the relevant URL is used. This is then compared with the threshold value.

The automatic registering information is formed of a registering flag and a category name. For the registering flag, whether the relevant URL should be registered automatically to the bookmark or not when the number of times of display reaches the relevant importance degree and the category name of the bookmark for automatic registering is set to the category name. The category name is valid when registering is "YES". For example, when registering is "YES", the relevant URL is automatically registered to the designated category in the bookmark when the number of times of display reaches the relevant importance degree.

FIG. 3 is a block diagram illustrating an example of an image structure of a WWW browser according to a preferred embodiment of the present invention. As illustrated, image 130 of the WWW browser is formed of tool bar 131, address section 132, and display area 133. The tool bar 131 is formed by adding, to the tool bar of the related art, registering icon 134 for registering an importance degree to the definition management note 18, deleting icon 135 for deleting information of the definition management note 18 and change icon 136 for modifying information of the definition management note 18.

URL information is displayed in address section 132. In the display area 133, the page is displayed and input information for the other registration and information of the definition management note 18 to be deleted is also displayed.

FIG. 4 is a block diagram showing an example of the degree of importance registering image. In the display area 133 of the registering image, a menu for setting the URL information (information which is the same as address 132) as the registering object, importance degree and threshold value, importance degree mark to be displayed, and a

"YES" or "NO" for requirement of automatic registering and category name of a bookmark for automatic registering is displayed. A user can perform registering by selecting a radio button given before "REGISTERING" and then clicking determination button 138. For the contents to be registered, the registering information can effectively be determined by selecting a radio button given before each information. Here, for the degree of importance mark, a character to be displayed may be designated directly or a path name of the file storing the information to be displayed may be designated. Moreover, it is also possible to set a plurality of importance degrees which cannot be displayed in one image by manipulating the scroll bar 137.

FIG. 5 is a block diagram showing an example of an image to be deleted in the definition management note 18 among the images registered. In the display area 133 of the image to be deleted, a list of information of all URLs registered in the definition management note 18 is displayed. When a large amount of information is registered, the scroll bar 137 must be manipulated. A user can delete the relevant definition information by selecting the radio button given in front of the "deletion of definition" and then clicking the determination button 138. Moreover, a user can also delete only the number of times of display by selecting the radio button in front of the "deletion of the number of times of display".

FIG. 6 is a block diagram showing an example of image to be changed in the definition management note. In the display area 133 of the image to be changed, a list is provided of the information registered of all URLs of the definition management note 18. When a large amount of information is registered, it is required to manipulate the scroll bar

137. A user can change the relevant definition information by selecting the radio button in front of "change" and then clicking the determination button 138. The information to be changed is the information (given the underline in the image) registered in the image registered. However, automatic registering can be changed by selecting the radio button in front of "YES" and "NO". Here, when the category name is changed, the relevant URL registered with the old category name of bookmark is automatically transferred to the new category name.

FIG. 7 is a block diagram showing a display example of the Web page to the WWW browser. The URL (<http://aaa.co.jp/>) of the Web page is displayed in the address area 133. "What's New", "INQUIRY", "NEW PRODUCTS", "V SERIES PRODUCT" which are given the underlines in the display area 133 indicate the URL of another Web page or URL of file data. This figure indicates that a figure is displayed in the Web page.

FIG. 8 is a block diagram showing a display example of importance degree to the Web page. In the display area 133, a Web page similar to FIG. 7 should be displayed. The URL of "V SERIES PRODUCT", given the underline, is registered to the definition management note 18 and the number of times of display has therefore reached the threshold value of the degree of importance of the definition management note 18. In this case, "Importance" is the degree of importance mark which is displayed as an underline in "V SERIES PRODUCT".

FIG. 9 is a block diagram showing an example of automatically generating a Web page from the bookmark. Since the storing format to the bookmark is different depending on the WWW browser, the information stored in the bookmark generally includes the category

name and URL of the Web page. The automatic page generation unit 24 generates the Web page 25 from the information of bookmark 19. The underline indicates that the name one the Web page is URL. For example, a user clicks the "V series product" of the Web page 25, and the Web page of "http://bbb.co.jp/b.html" is displayed. Moreover, the Web pages are displayed in the Web page 25 in the sequence of the larger number of times of display because the URLs of bookmark are sorted in the sequence of the larger number of times of display by the automatic registration control unit.

FIGS. 10A-10D represent a flowchart indicating the display process. In explanation of this flowchart, the number following the letter S indicates the step number. In step, S101, the WWW browser waits, upon activation, for instruction for manipulation from a user. In step S102, when an end request is issued from the WWW browser, the process of WWW browser is completed. In other cases, the process goes to the step S103.

In step S103, the page corresponding to the URL designated by the WWW browser is down-loaded from the server. However, when the latest page exists at the terminal where the WWW browser operates, it is not required to down-load the pages from the server. Turning to step S104, all processes are completed for the URL described in the page, the process goes to the step S114 and in other cases, the process goes to the step S105.

In step S105, URLs described in the page are sequentially extracted. Likewise, in step S106, when the extracted URL is registered to the definition management note, the process goes to the step S107. In other cases, the process goes to the step S104. Step S107 updates the number of times of display of the relevant URL of the definition management note (counted up). In step S108, when the number of times of display of the relevant URL

reaches the threshold value corresponding to the degree of importance of the definition management note, the process goes to the step S109 and in other cases, the process goes to the step S104.

In step S109, the degree of importance mark is set (update of the Web page) to the relevant URL in the page with letters, images, voices or density of color, etc. In step S110, automatic registering to the bookmark of the WWW browser is designated to the relevant URL of the definition management note, the process goes to the step S111 and in other cases, the process goes to the step S104.

In step S111, when the category for registering the relevant URL exists within the bookmark of the WWW browser, the process goes to the step S113 and in other cases, the process goes to the step S112. For step S112, when the category (folder or directory) to which the relevant URL is registered is newly generated in the bookmark of the WWW browser.

In step S113, the relevant URL is additionally registered to the category of bookmark of the WWW browser and the additionally registered URLs of the category are sorted in the sequence of the number of times of display and the process goes to the step S104. In step S114, a Web page is generated (when it is already generated, it is updated) with the URL of the bookmark 19. For step S115, the Web page (down-loaded Web page or Web page displaying the degree of importance) is displayed in the WWW browser and the process goes to the step S101.

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11A-11B represent
FIG. ~~11~~ is a flowchart showing the registering process. The number following the

letter "S" indicates the step number in the explanation of the flowchart. According to step

S201, when the registration icon of the tool bar of WWW browser is clicked, the registered image of the URL being displayed is then displayed. In step S202, the browser waits for input of registering information from a user.

As shown by step S203, when the WWW browser issues the end instruction, the process of WWW browser is completed. In other cases, the process goes to the step S204. Likewise in step S204, when the scroll request is issued, the process goes to the step S205. In other cases, the process goes to the step S206 because the registering information is input.

In step S205, the information of registered image is scrolled and the process goes to the step S202. For step S206, when the designated importance degree is correct (for example, a value within the allowable range), the process goes to the step S207. In other cases, the process goes to the step S211.

Turning to step S207, when the designated threshold value is correct (for example, a value within the allowable range), the process goes to the step S208. In other cases, the process goes to the step S211. Likewise, in step S208, when the designated registering mark is correct (for example, letters or designated file exists), the process goes to the step S209. In other cases, the process goes to the step S211.

In step S209, when the designated category name is correct (for example, alphanumeric letters in the allowable range), the process goes to the step S210. In other cases, the process goes to the step S211. For step S210, the degree of importance, threshold value, registering mark, "YES" or "NO" of automatic registering to bookmark, category name and URL name input from the registered image are registered to the definition management note and the process goes to the step S201.

Turning to step S211, an error message to request re-input is output to the registered image and the process goes to the step S202.

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12A-12B represent
FIG. 12 is

a flowchart showing the deleting process. In the explanation of this flowchart, the number following the letter S indicates the step number.

5 In step S301, when the deleting icon of the tool bar of WWW browser is clicked, a list of the URLs registered in the definition management note is displayed in the image to be deleted. In step S302, the WWW browser waits for input of the registering information from a user.

10 For step S303, when the WWW browser issues an end instruction, the process of WWW browser is completed. In other cases, the process goes to the step S304. In step S304, when the scroll request is issued, the process goes to the step S305. In other cases, the process goes to the step S306 because the deleting information is input.

15 In step S305, information in the registered image is scrolled, and the process goes to the step S302. For step S306, when the definition deleting request is issued, the process goes to the step S307. In other cases, the process goes to the step S308. As illustrated in step S307, after the URL information selected from the definition management note is all deleted, the process goes to the step S310.

20 In step S308, when the number of times of display deleting request is issued, the process goes to the step S309. In other cases, the process goes to the step S310. According to step S309, after only the number of times of display of the URL selected from the definition management note is cleared, the process goes to the step S310. In step S310,

when process is completed for all URLs designated, the process goes to the step S301. In other cases, the process goes to the step S306.

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13A-13D represent
FIG. ~~13~~ is a flowchart showing the changing process. In the explanation of this

flowchart, the number following the letter S indicates the step number. As shown in step S401, when the changing icon of the tool bar of WWW browser is clicked, a list of the URLs registered in the definition management note is displayed in the image to be changed. By way of step S402, the WWW browser waits for input of changing information from a user. For step S403, when the WWW browser issues an end request, the process of WWW browser is completed. In other cases, the process goes to the step S404.

As illustrated in step S404, when the scroll request is issued, the process goes to the step S405. In other cases, the process goes to the step S406 because the changing information is input. In step S405, after the information of image to be changed is scrolled, the process goes to the step S402. In step S406, when the change of URL is selected, the process goes to the step S408. In other cases, the process goes to the step S407.

By way of step S407, when process is completed for all URLs designated, the process goes to the step S401. In other cases, the process goes to the step S406. Likewise, in step S408, when the degree of importance is changed (when the degree of importance is different from the preceding contents), the process goes to the step S409. In other cases, the process goes to the step S410.

For step S409, when the designated importance degree is correct (for example, a value within the allowable range), the process goes to the step S410. In other cases, the process goes to the step S418.

Turning to step S410, when the threshold value is changed (threshold value is different from the preceding contents), the process goes to the step S411. In other cases, the process goes to the step S412. By way of step S411, when the designated threshold value is correct (for example, a value within the allowable range), the process goes to the step S412.

5 In other cases, the process goes to the step S418.

As illustrated in step S412, when registering mark is changed (registering mark is different from the preceding contents), the process goes to the step S413. In other cases, the process goes to the step S414. By way of step S413, when the designated registering mark is correct (for example, letters or designated file exists), the process goes to the step S414. In other cases, the process goes to the step S418.

For step S414, when the category name is changed (category name is different from the preceding contents), the process goes to the step S415. In other cases, the process goes to the step S417. Likewise, in step S415, when the designated category name is correct (for example, an alphanumeric latter in the allowable range), the process goes to the step S416. In other cases, the process goes to the step S418.

By way of step S416, the relevant URL in the old category name of the bookmark is transferred to the new category name. For step S417, the information of the definition management note of the relevant URL name is changed with the degree of importance, threshold value, registering mark, "YES" or "NO" of automatic registering to bookmark and category name input from the image to be changed and the process goes to the step S401. After an error message to request re-input is output to the registered image, the process goes to the step S402.

Although a few preferred embodiments of the present invention have been shown and described, it will be appreciated by those skilled in the art that changes may be made in these embodiments without departing from the principles and spirit of the invention, the scope of which is defined in the claims and their equivalents.

CLAIMS

What is claimed is:

1 1. A viewer to display images which are accessible by an associated identifying
2 information, said viewer comprising:

3 a definition management note to store a number of times of display of any image
4 which has been accessed by an associated unique identifying information; and

5 an importance degree control unit to count a number of times of display of any
6 image accessed by the unique identifying information, wherein said importance degree
7 control unit outputs the number for storage by said definition management note.

1 2. A viewer as claimed in claim 1, wherein
2 said definition management note stores a plurality of identifying information which
3 respectively correspond to a plurality of threshold values, and

4 said importance degree control unit executes a process of an importance degree
5 mark when the counted number of times of display of any image accessed by the unique
6 identifying information exceeds a corresponding stored threshold value.

1 3. A viewer as claimed in claim 2, wherein each of the threshold values stored
2 in said definition management note have an associated displayable image as a counting
3 object.

1 4. A viewer as claimed in claim 3, said viewer being a browser that displays
2 Web pages accessed via the Internet as the images and each identifying information being a
3 URL, wherein

4 said definition management note defines an importance degree for each URL which
5 has been accessed a number of times exceeding an associated threshold value, and

6 said importance degree control unit executes a process corresponding to an
7 importance degree mark for each URL having an associated importance degree.

1 5. A viewer as claimed in claim 3, said viewer being a browser that displays
2 Web pages accessed via the Internet as the images and each identifying information being a
3 URL, wherein

4 an importance degree mark corresponding to an importance degree is defined for
5 each URL stored in said definition management note, and

6 said importance degree control unit selects processes for each of the importance
7 degree marks depending on the number of times of display.

1 6. A viewer as claimed in claim 3, said viewer being a browser that displays
2 Web pages accessed via the Internet as the images and each identifying information being a
3 URL, wherein

4 said importance degree mark is a program object which notifies users that a
5 number of times of display of associated Web pages is indicated by a density of color, or by
6 characters or images being displayed within the associated Web page.

1 7. A viewer as claimed in claim 3, said viewer being a browser that displays
2 Web pages accessed via the Internet as the images and each identifying information being a
3 URL, wherein

4 said importance degree control unit updates the counted number of times of display
5 of a corresponding Web page before the Web page is displayed with the browser, and

6 said importance degree control unit executes a process designated by said
7 importance degree mark on the basis of the counted number of times of display.

1 8. A viewer as claimed in claim 3, said viewer being a browser that displays
2 Web pages accessed via the Internet as the images and each identifying information being a
3 URL, wherein

4 said importance degree control unit can add, change, and delete information in the
5 definition management note relating to a Web page being displayed by said browser.

1 9. A viewer as claimed in claim 2, wherein said viewer is a browser that
2 displays Web pages accessed via the Internet as the images, and said importance degree
3 control unit counts URLs as the unique identifying information, said viewer further
4 comprising:

5 an automatic registration control unit to register Web pages that have exceeded the
6 stored threshold value to a bookmark.

1 10. A viewer as claimed in claim 9, wherein said automatic registration control
2 unit is provided with a sorting function to rearrange a registration sequence of Web pages in
3 the bookmark depending on the number of times of display.

1 11. A viewer as claimed in claim 10, further comprising:
2 an automatic page generating unit to automatically generate Web pages from
3 corresponding URLs registered in the bookmark.

1 12. A viewer as claimed in claim 1, wherein said viewer is a browser that
2 displays Web pages accessed via the Internet as the images, and said importance degree
3 control unit counts URLs as the identifying information, said viewer further comprising:
4 an automatic registration control unit to register Web pages that have been
5 displayed greater than a threshold value to a bookmark.

1 13. A viewing method using a browser to display Web pages having associated
2 URLs, comprising the steps of:
3 counting a number of times of display of a Web page accessed by an associated
4 URL; and
5 executing a particular process when the counted number of times exceeds a
6 threshold value.

1 14. The viewing method according to claim 13, wherein the particular process
2 notifies users that a threshold value of a number of times of display has been exceeded
3 through display in a Web page.

1 15. The viewing method according to claim 14, wherein the counted number of
2 times of display of a corresponding Web page is updated before the Web page is displayed
3 with the browser.

1 16. A display method of an image which is accessible by an associated
2 identifying information, said display method comprising the steps of:
3 storing a number of times of display of any image which has been accessed by an
4 associated unique identifying information; and
5 counting a number of times of display of any image accessed by the unique
6 identifying information.

1 17. The viewing method according to claim 16, wherein said counting step
2 counts a number of times of display of Web pages accessed with a browser via the Internet,
3 and the unique identifying information is a URL, further comprising the step of:
4 registering a Web page which has been displayed greater than the threshold number
5 to a bookmark.

1 18. The viewing method according to claim 16, wherein said browser displays
2 Web pages via the Internet, further comprising the step of:
3 notifying users that a threshold value of a number of times of display has been
4 exceeded through display in a Web page.

1 19. A browser to display a Web page accessed via the Internet by an associated
2 URL, said browser comprising:
3 a definition management note to store a number of times of display of any Web
4 page which has been accessed by an associated URL; and
5 an importance degree control unit to count a number of times of display of any
6 Web page accessed by the URL, wherein said importance degree control unit outputs the
7 number for storage by said definition management note.

1 20. The browser according to claim 19, wherein
2 said definition management note stores a plurality of URLs which respectively
3 correspond to a plurality of threshold values, and
4 said importance degree control unit executes a process of an importance degree
5 mark when the counted number of times of display of any Web page accessed by a URL
6 exceeds a corresponding stored threshold value.

ABSTRACT OF THE DISCLOSURE

A viewer in the form of a browser displays a Web page which is accessible by an associated unique identifying information. The associated identifying information is a URL. The viewer includes a definition management note which stores a number of times of display of any Web page which has been accessed by an associated URL. The viewer also includes an importance degree control unit to count a number of times of display of any Web page accessed by the unique URL. The importance degree control unit outputs a number for storage by the definition management note. When the counted number of times of access of a unique URL exceeds a threshold value, the associated Web page is automatically updated to a bookmark by way of the unique URL. A number of different processes may be executed to sort the URLs registered in the bookmark according to a degree of importance. The different processes include assigning different colors to the URLs or changing a display in a Web page accessed by a registered URL.

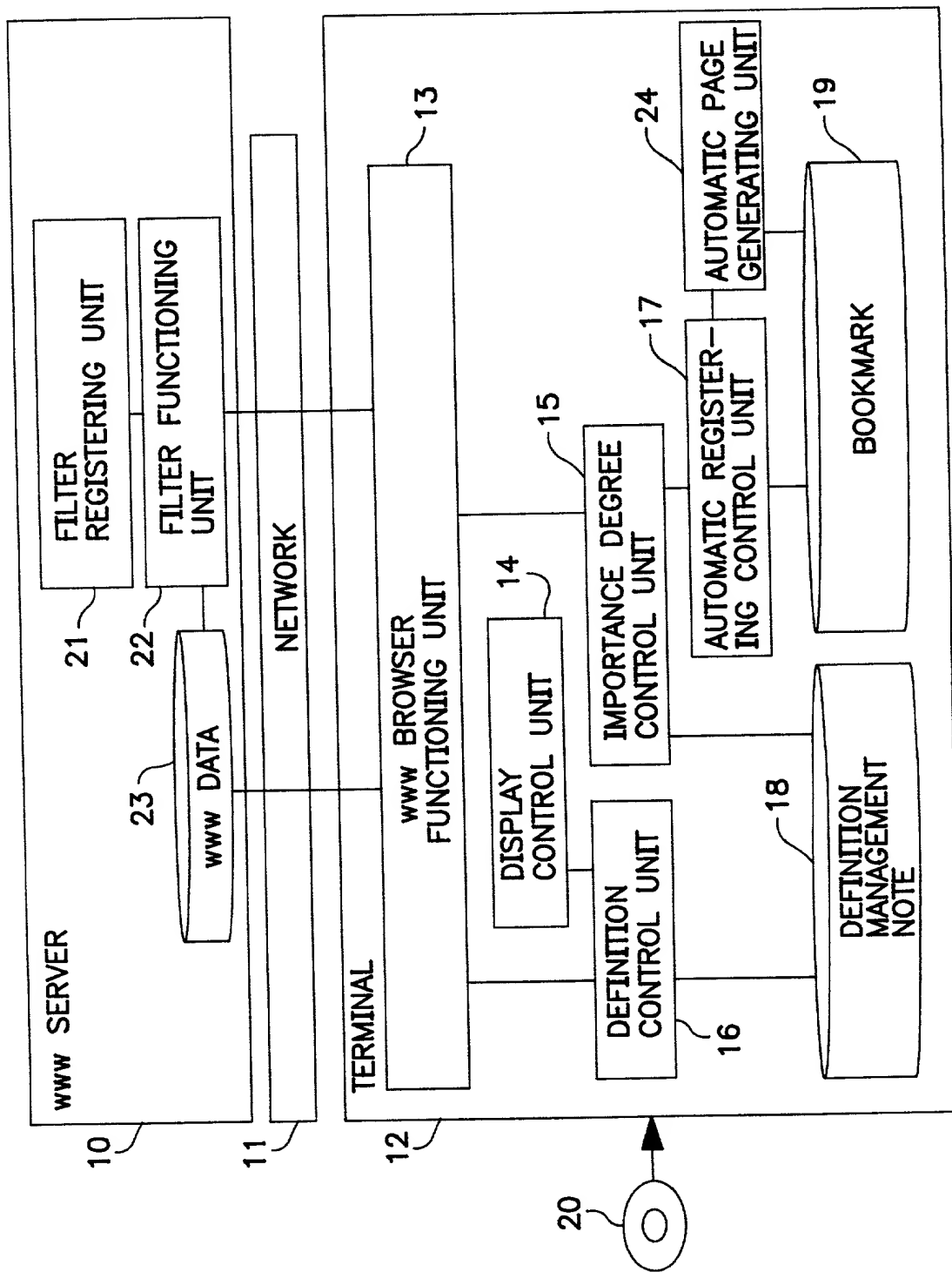


FIG. 1

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DEFINITION MANAGEMENT NOTE									
URL	IMPORTANCE DEGREE	THRESHOLD VALUE	IMPORTANCE DEGREE MARK		NO. OF TIMES OF USE	AUTOMATIC REGISTERING		CATEGORY NAME	
			FORMAT	MARK		REGISTER FLAG			
http://aaa.co.jp/	20	20	LETTER	MUCH	10	YES		SEARCH	
	10	10	LETTER	INTERMEDIATE	10	NO			
http://b b.co.jp/	3	10	FIGURE	LEVEL 3.GIF	1	YES		HOBBY	
	1	5	FIGURE	LEVEL 1.GIF	1	NO			
:	:	:	:	:	:	:	:	:	:
	:	:	:	:	:	:	:	:	:

FIG. 2

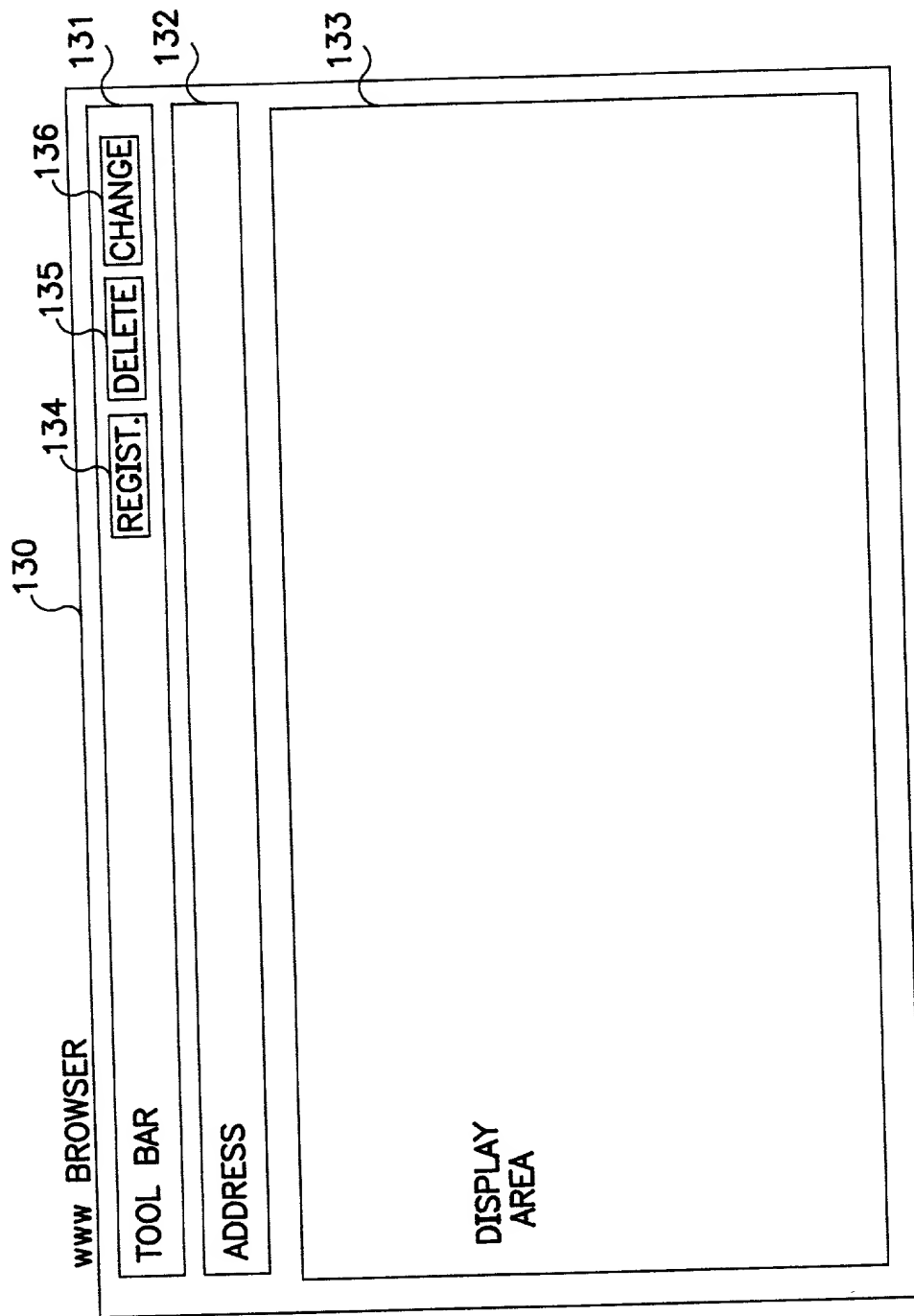


FIG. 3

[illegible]

FIG. 4

[illegible]

130

www BROWSER

131

132

133

DELETE

137

DELETION MENU

○ DELETION OF NO. OF TIMES OF USE

URL: http://aaa. co. jp THRESHOLD VALUE :20

IMPORTANCE DEGREE :20 YES REGISTERED SEARCH

AUTOMATIC REGISTERING CATEGORY NAME

:10

AUTOMATIC REGISTERING

NO. OF TIMES OF USE :10

○ URL: http://bb. co. jp/

DETERMINATION

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FIG. 5

www BROWSER

CHANGE

CHANGE MENU

O CHANGE

URL: <http://aaa.co.jp/>

IMPORTANCE DEGREE :20

IMPORTANCE DEGREE

MARK

AUTOMATIC

REGISTERING

REGISTERING

CATEGORY

NAME

IMPORTANCE DEGREE :10

THRESHOLD VALUE :20

SEARCH

:MUCH

● YES ○ NO

:SEARCH

THRESHOLD VALUE :10

SEARCH

:INTERMEDIATE

● YES ○ NO

DETERMINATION

↑

↑

FIG. 6

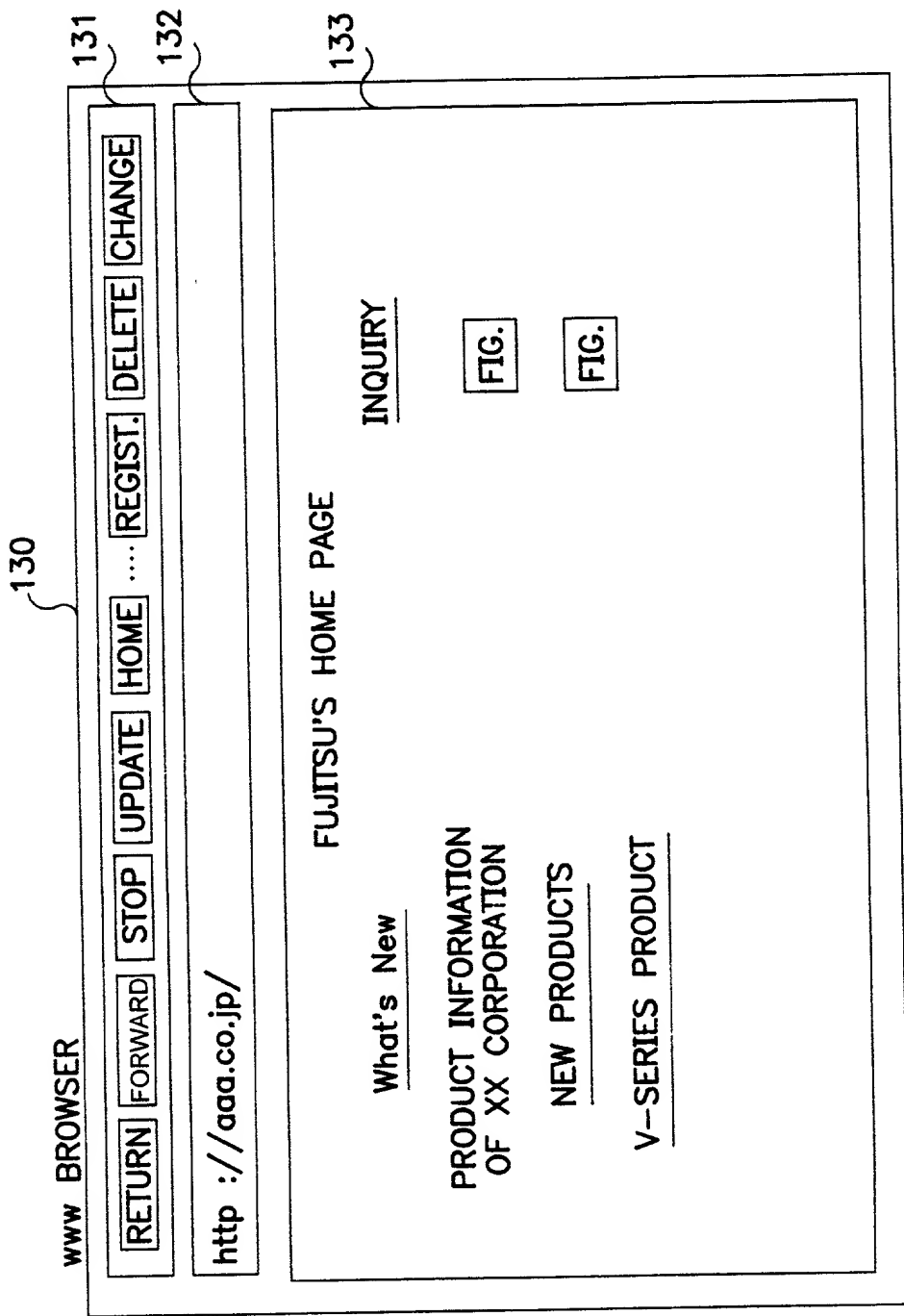


FIG. 7

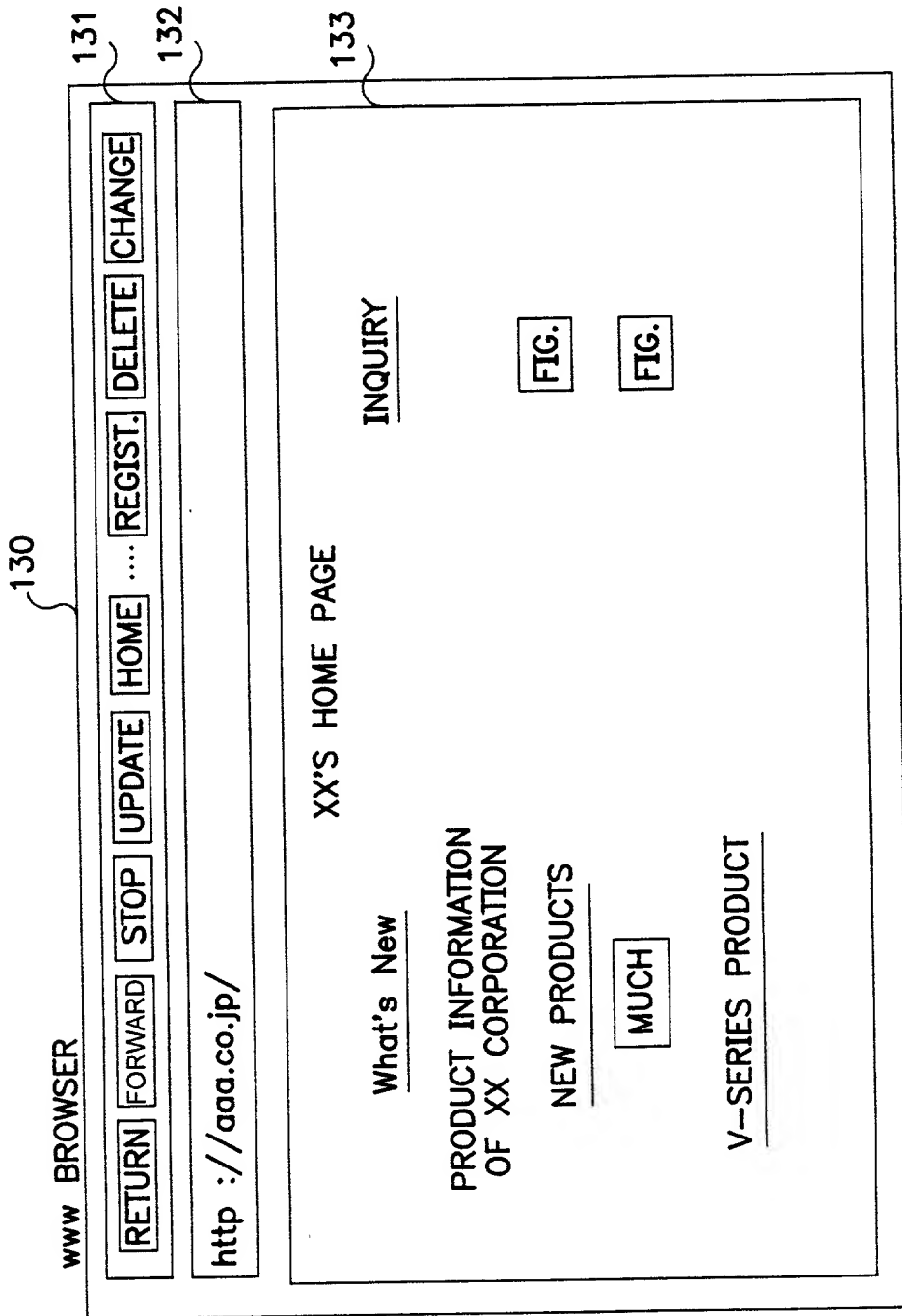


FIG. 8

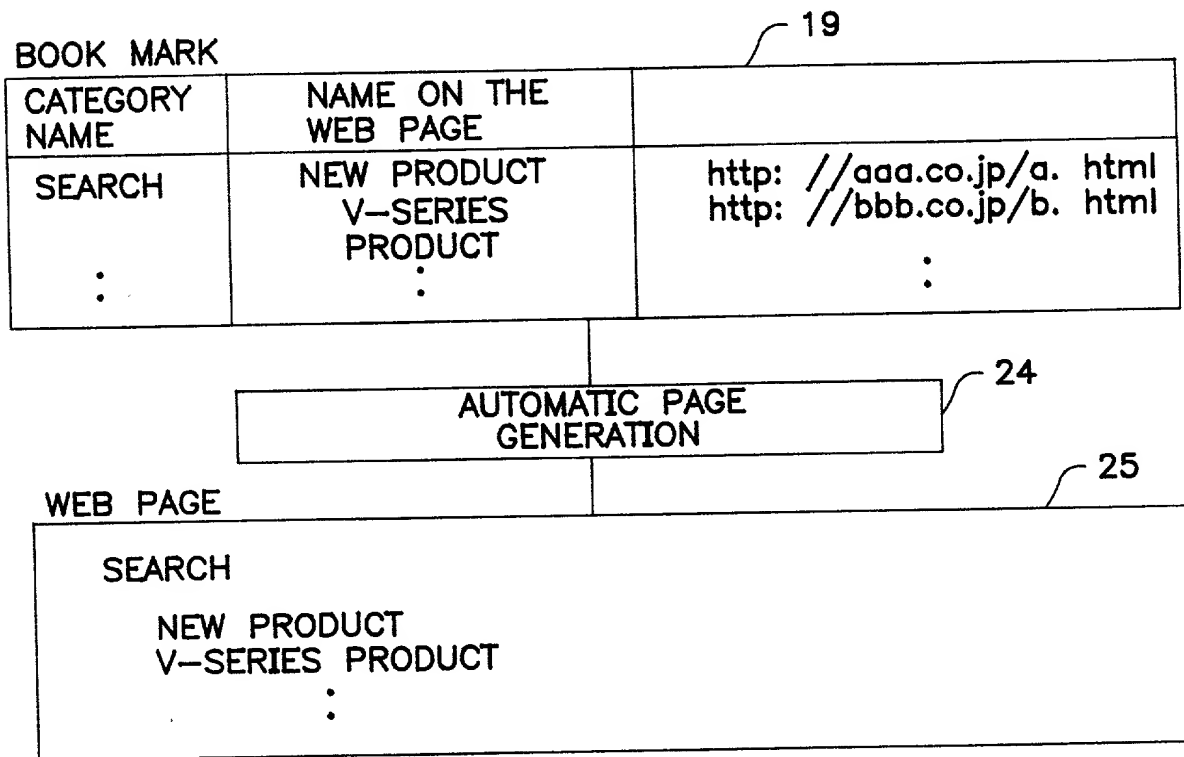
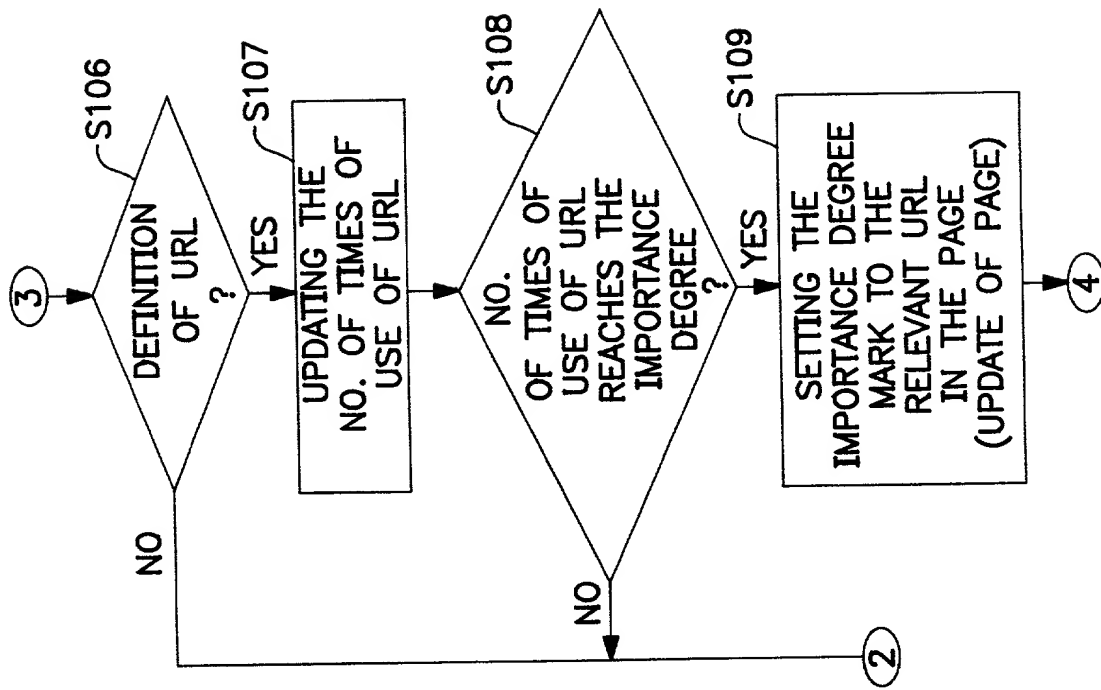
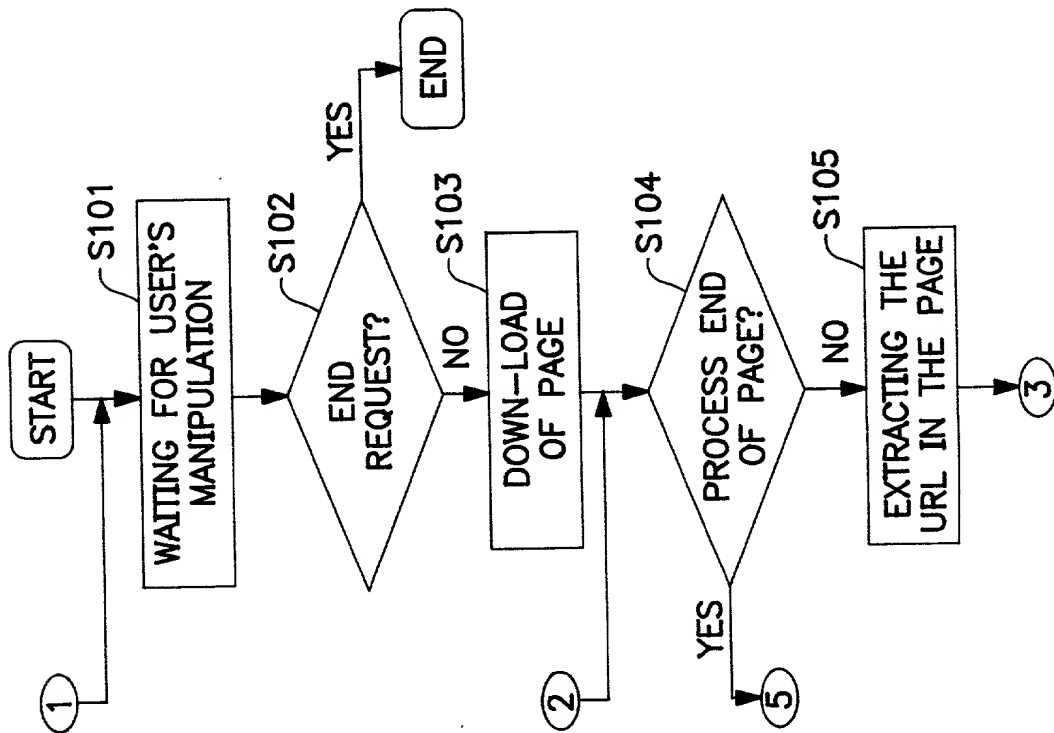


FIG. 9



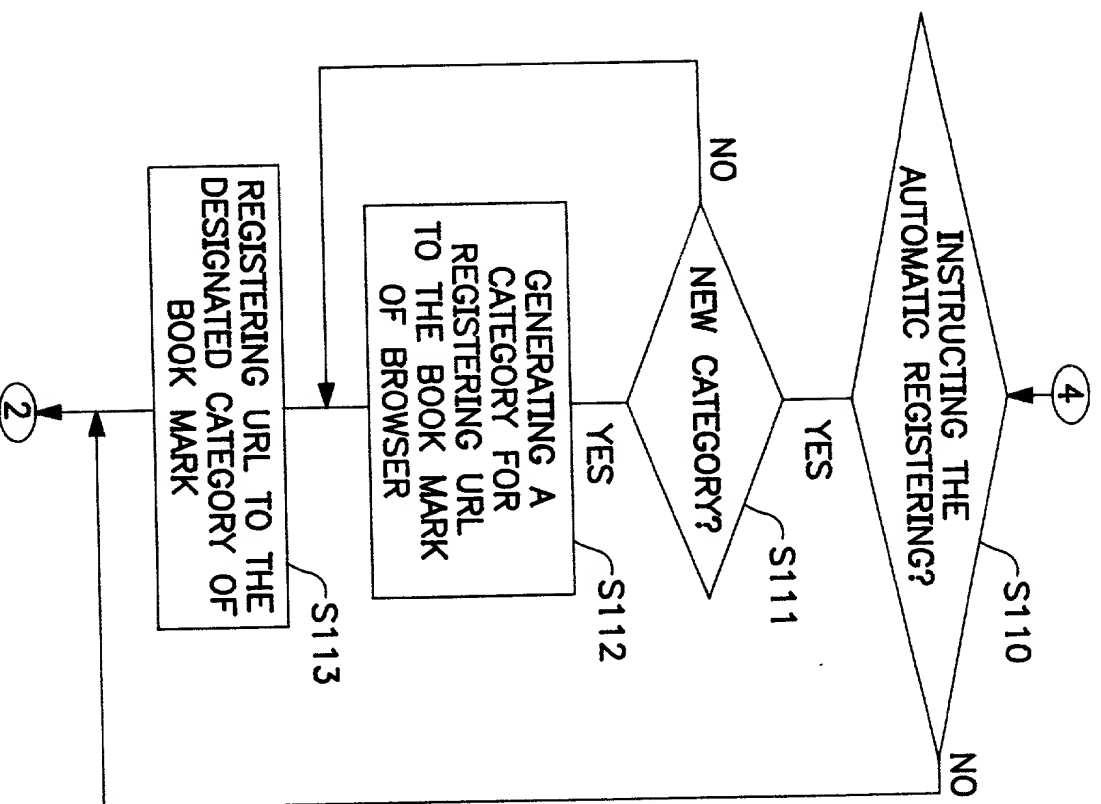


FIG. 10C

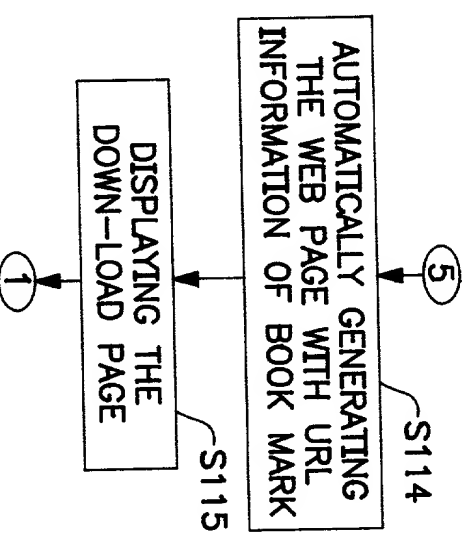


FIG. 10D

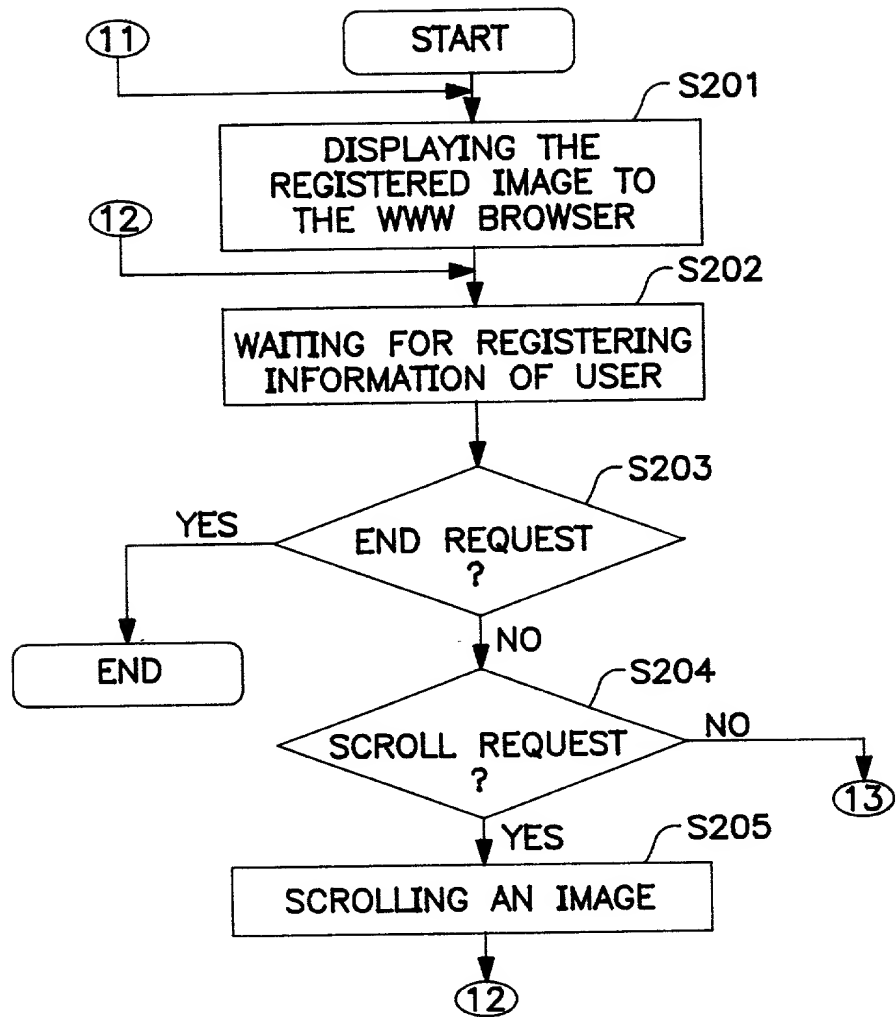


FIG. IIA

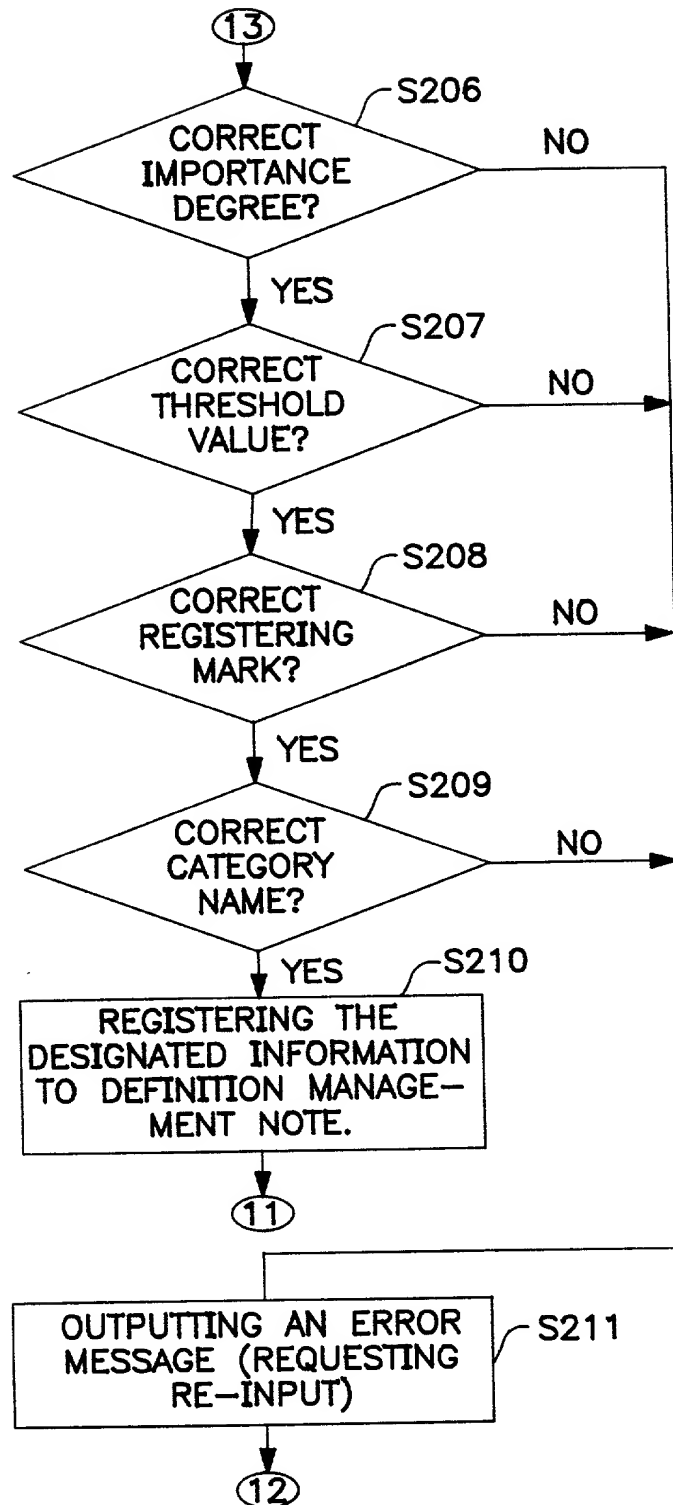


FIG. IIB

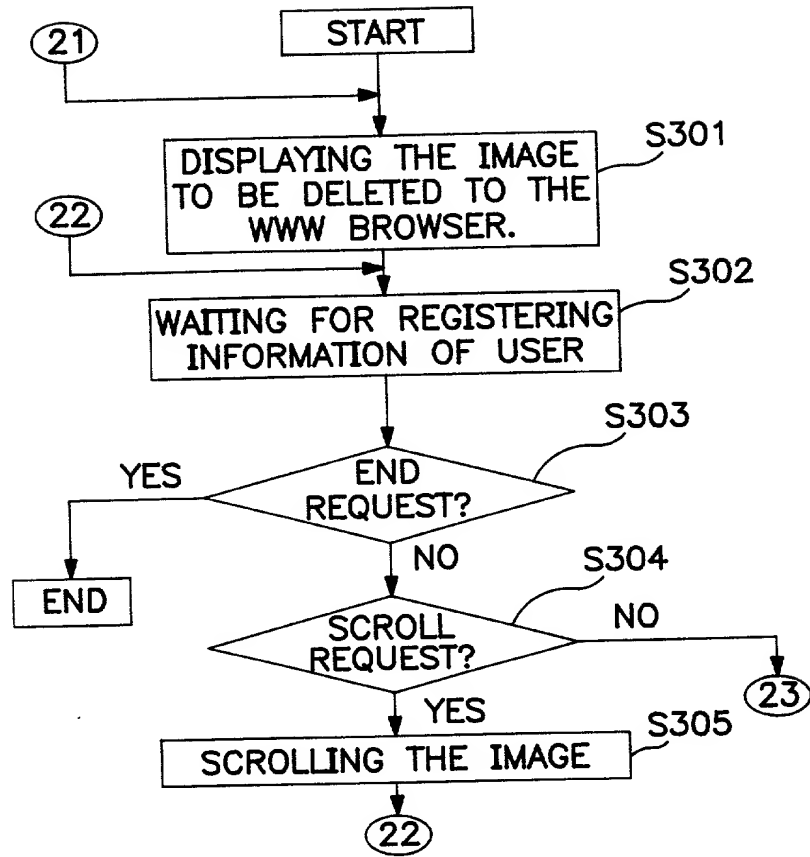


FIG. 12A

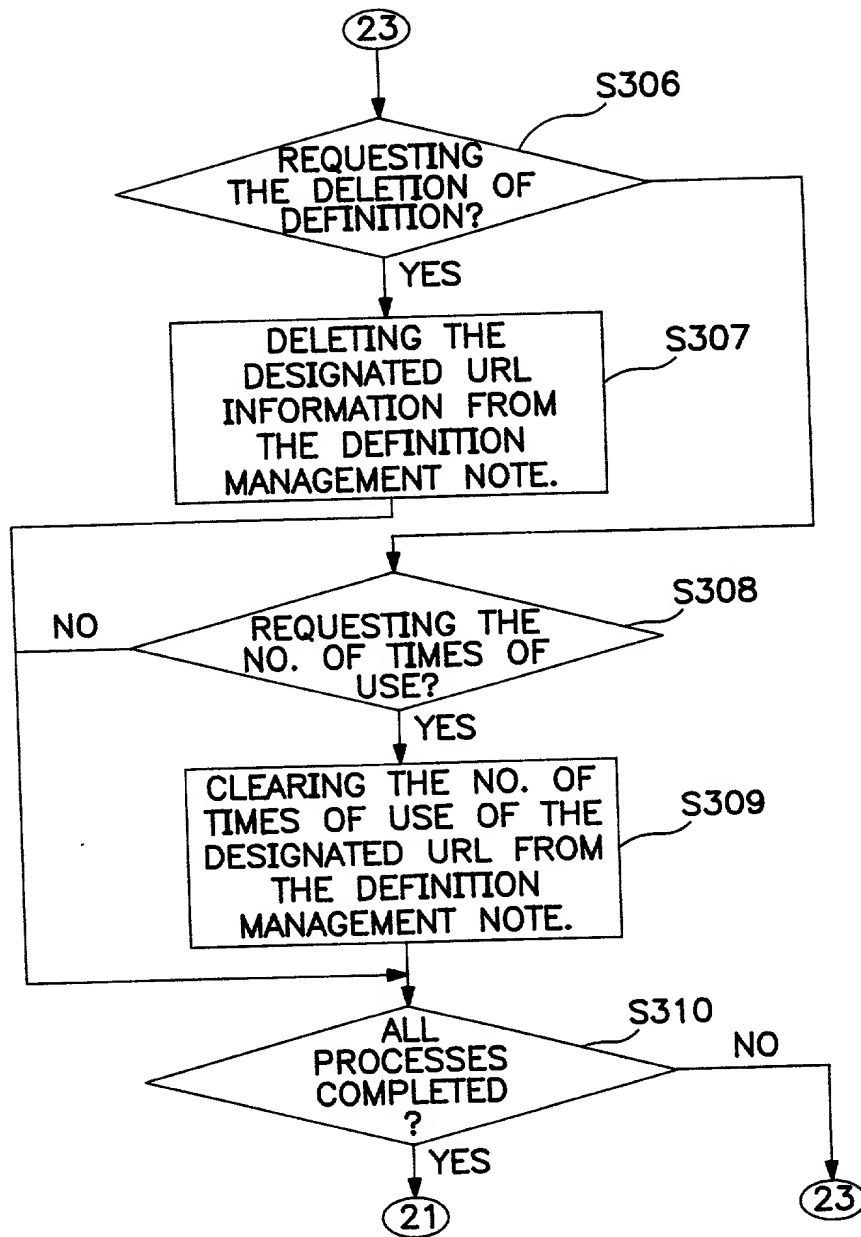


FIG. 12B

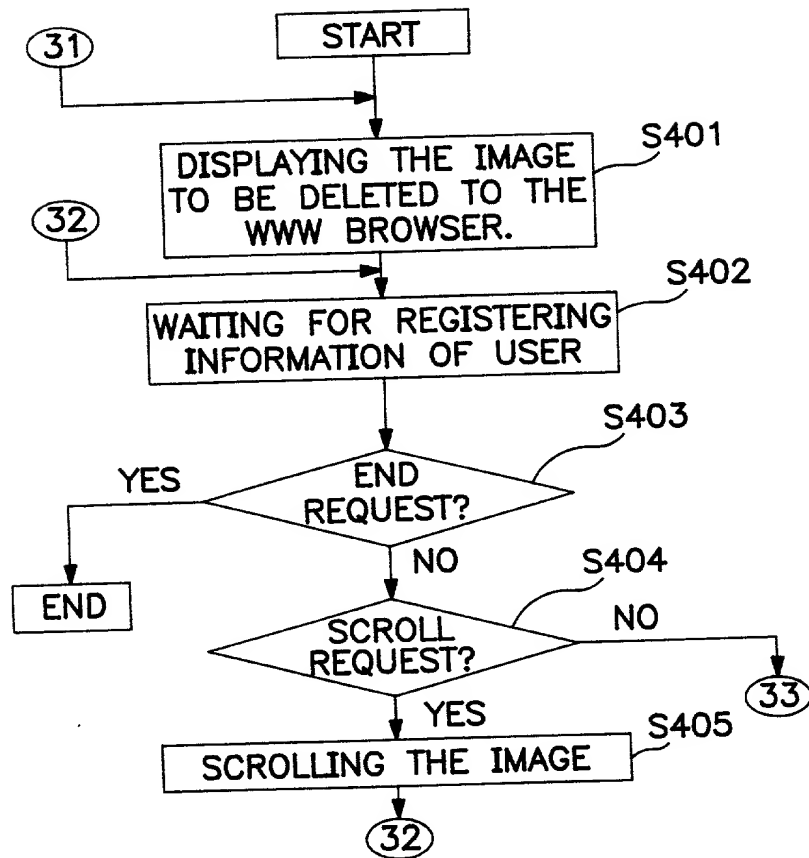


FIG. 13A

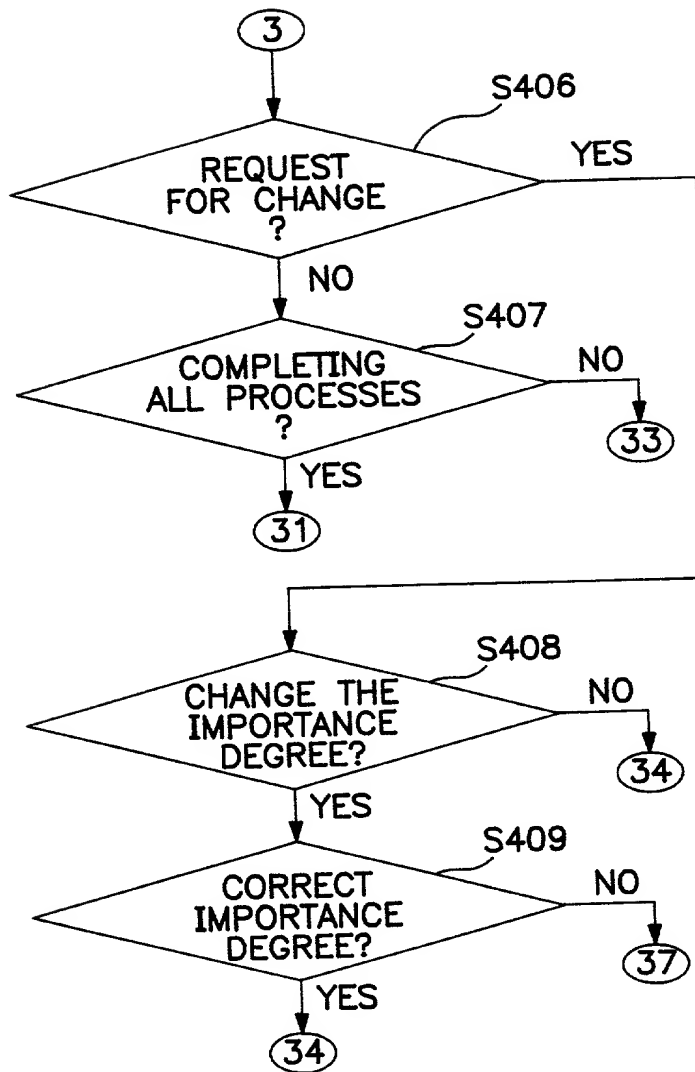


FIG. 13B

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2
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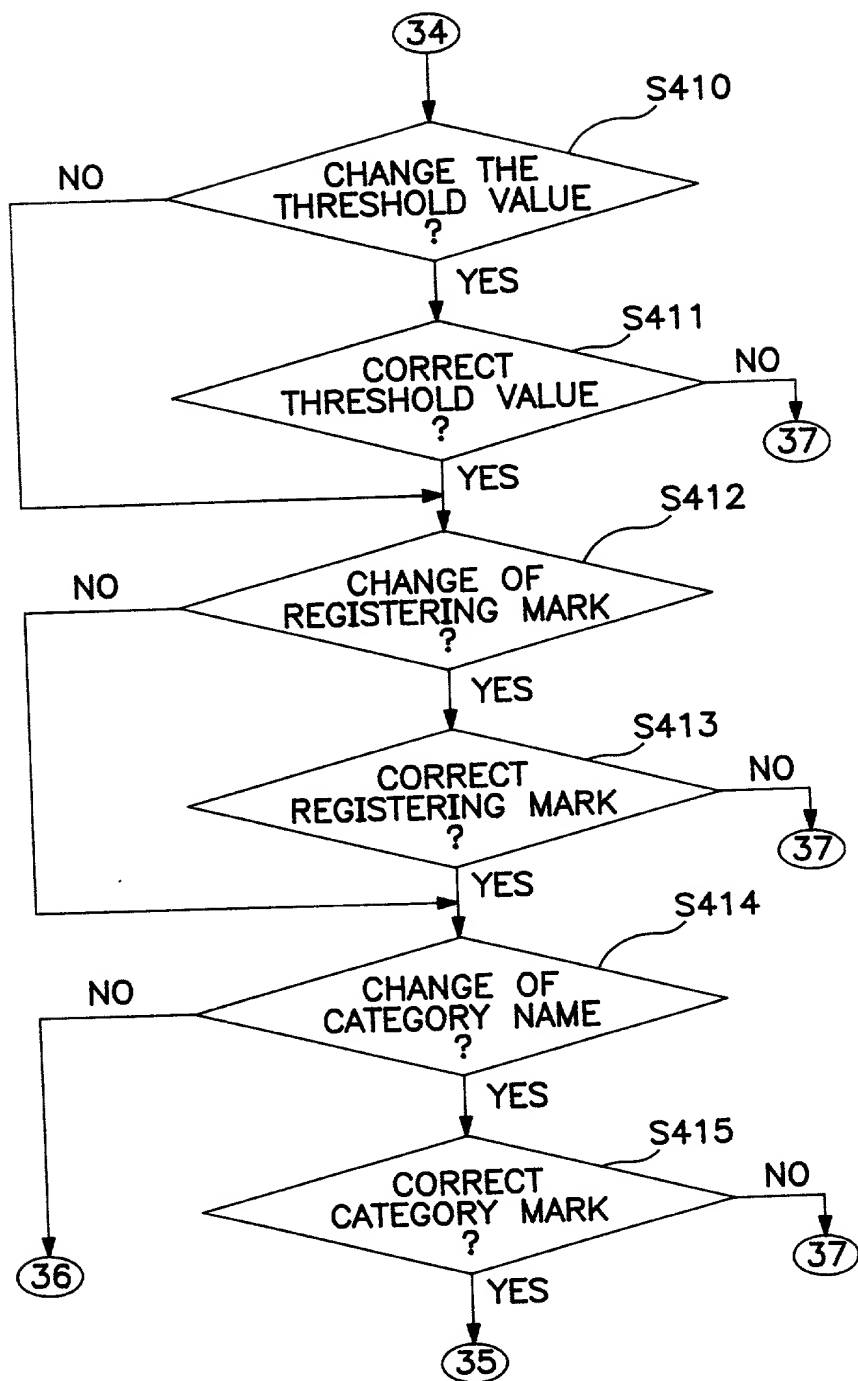


FIG. 13C

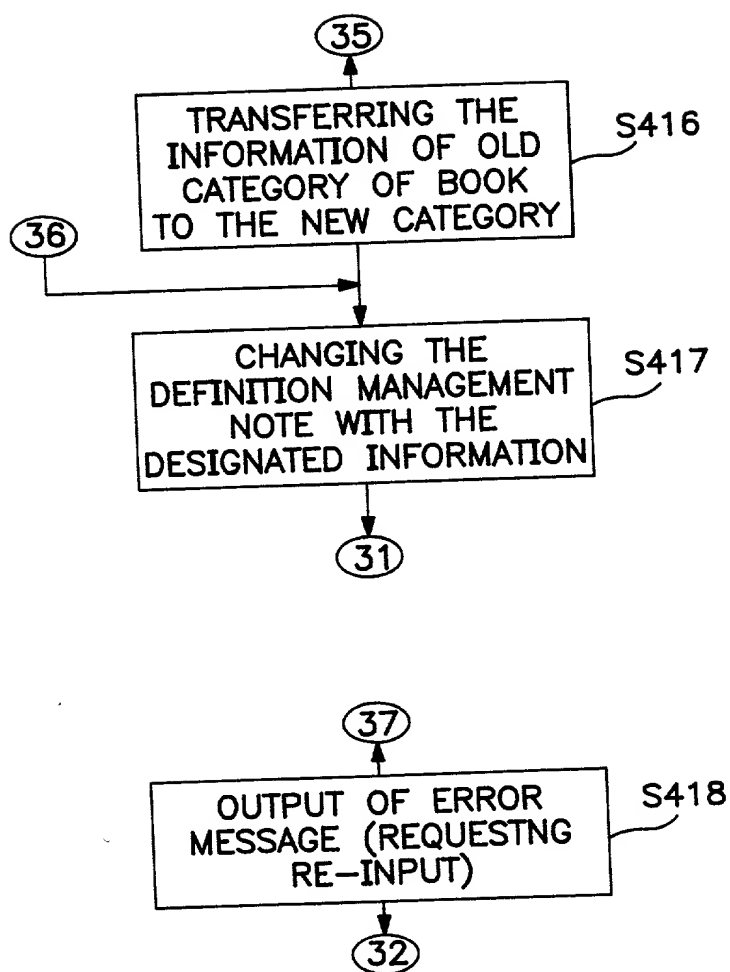


FIG. 13D

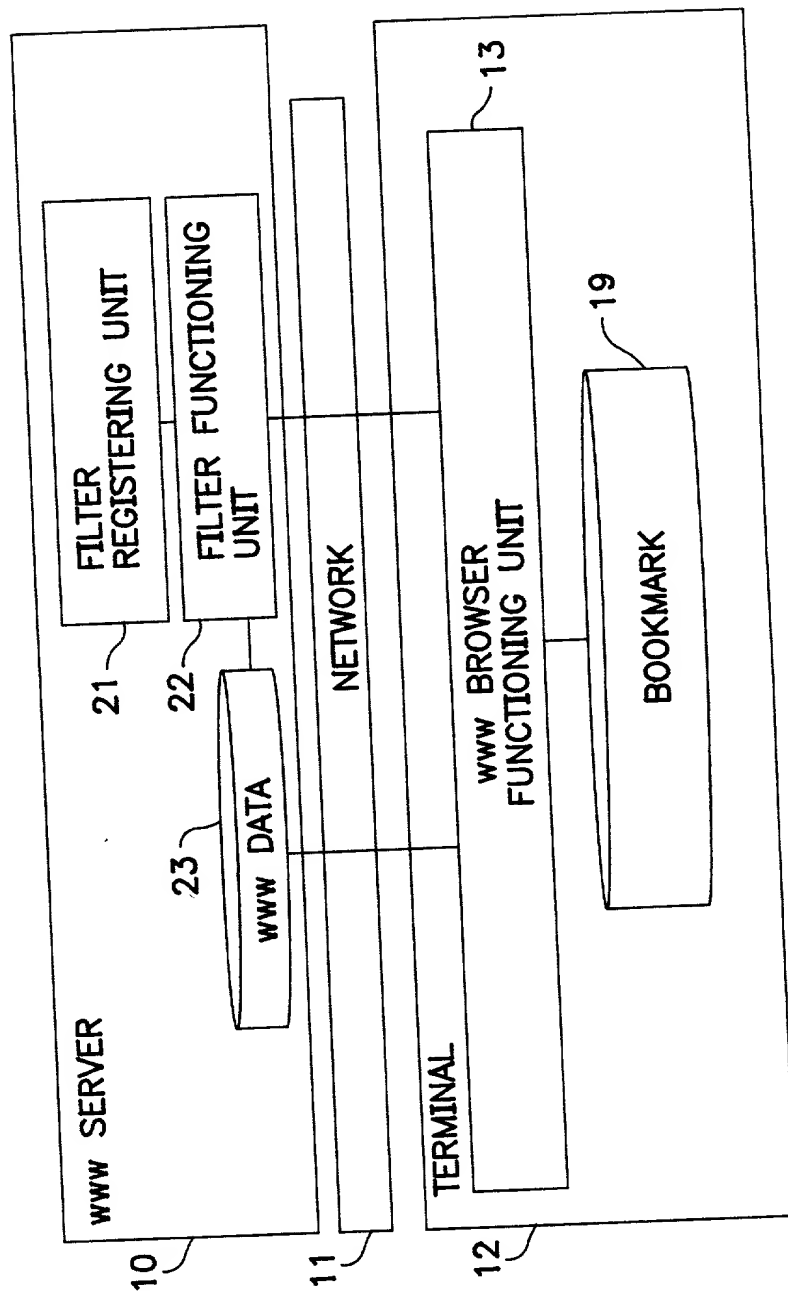


FIG. 14
PRIOR ART

COMBINED DECLARATION/POWER OF ATTORNEY FOR UTILITY/DESIGN PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Viewer System and Method Allocating a Degree of Importance to a Network Address Based Upon Frequency of Display

the specification of which is attached hereto, unless the following box is checked:

☐ was filed on _____ as United States Application Number or PCT International Application Number _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefit(s) under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application(s) for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

10-269277 Japan 24 September 1998
(Number) (Country) Day/Month/Year Filed

☐

(Number) (Country) Day/Month/Year Filed

☐

I hereby claim the benefit under 35 U.S.C. § 120 or § 119(e) of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application(s) in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

(Application Serial No.) (Filing Date) (Status -- patented, pending, abandoned)

(Application Serial No.) (Filing Date) (Status -- patented, pending, abandoned)

I hereby appoint the following attorneys and agent to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

James D. Halsey, Jr., 22,729; Harry John Staas, 22,010; David M. Pitcher, 25,908; John C. Garvey, 28,607; J. Randall Beckers, 30,358; William F. Herbert, 31,024; Richard A. Gollhofer, 31,106; Mark J. Henry, 36,162; Gene M. Garner II, 34,172; Michael D. Stein, 37,240; Paul I. Kravetz, 35,230; Gerald P. Joyce, III, 37,648; Todd E. Marlette, 35,269; Harlan B. Williams, Jr., 34,756; George N. Stevens, 36,938; Michael C. Soldner, 41,455; Norman L. Ourada, 41,235; Kevin R. Spivak, P-43,148 and William M. Schertler, 35,348 (agent)

Address all correspondence to: STAAS & HALSEY, 700 Eleventh Street, N.W., Suite 500, Washington, D.C. 20001

Direct all telephone calls to: (202) 434-1500 - Facsimile No. (202) 434-1501

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Toshinao KOMURO

Inventor's Signature Toshinao Komuro Date March 11, 1999

Residence Numazu-shi, Shizuoka, Japan Citizenship Japan

Post Office Address c/o FUJITSU LIMITED, 1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki-shi, Kanagawa 211-8588, Japan

Full name of second joint inventor, if any _____

Second Inventor's Signature _____ Date _____

Residence _____ Citizenship _____

Post Office Address _____

☐ Additional inventors are being named on separately numbered sheets attached hereto.